

WHAT IS CLAIMED:

1. An optoelectronic device, comprising:
a semiconductor substrate;
an array of photodetectors formed adjacent the semiconductor substrate; and
one or more monolithic capacitors configured to capacitively couple one or more of the photodetectors to one or more bias terminals, wherein a continuous constant bias is applied to said one or more bias terminals.
2. The optoelectronic device of claim 1 wherein a plurality of monolithic capacitors couple a plurality of said photodetectors to said one or more bias terminals.
3. The optoelectronic device of claim 1 further comprising one or more bias resistors, wherein said one or more bias resistors couple said one or more photodetectors to said one or more bias terminals.
4. The optoelectronic device of claim 1 wherein a separate monolithic capacitor individually couples each of said one or more photodetectors to said one or more bias terminals.
5. The optoelectronic device of claim 1 further comprising a plurality of monolithic bias resistors, wherein a separate bias resistor is coupled between each of said one or more photodetectors and said one or more bias terminal.
6. The optoelectronic device of claim 1 further comprising a monolithic bias resistor coupled between said one or more photodetectors and a single bias terminal.
7. The optoelectronic device of claim 1 wherein each of said one or more capacitors comprises a dielectric layer formed adjacent to a first electrode and a conductive layer formed adjacent to said dielectric layer and overlapping a portion of said first electrode.